

Technical Fact Sheet

Addendum to Non-Domestic Services Compliance Guide 2013



TFS No. 004
Date: March 2016

Introduction

Active Chilled Beams (ACBs) can provide the major part of system cooling but often require higher Air Handling Unit (AHU) specific fan power (SFP) in order to achieve adequate induction on the terminal units; although the AHU SFP may be increased by use of ACBs as the chosen terminal unit, the overall / total system energy consumption is greatly reduced and as such a reduction in carbon emissions in both new and existing non-domestic buildings.

Active Chilled Beam Addendum to Part L

To enable designer's greater choice of AHU for systems with ACBs as the terminal units for an overall reduction in energy usage, there has been a recent addendum to the non-domestic building services compliance guide (2013 edition) to make allowance for ACBs overall system efficiency.

The addendum incorporates DCLG's view that when referring to Table 35 the maximum SFP for the central air handling unit, with heating and cooling for an active chilled beam system has an additional 0.3 SFP allowance as follows:

| Table 35 Addendum for Active Chilled Beams (ACB's) | | |
|---|---------------|--------------------|
| System type | SFP (W/(l.s)) | |
| | New Buildings | Existing Buildings |
| Central balanced mechanical ventilation system with heating and cooling and Active Chilled Beams (ACBs) | 1.9 | 2.5 |

The above AHU SFP figures are prior to the inclusion of further SFP allowances for additional components as detailed in Table 36 of the compliance guide.

Example:

For a central mechanical ventilation system with heating & cooling, active chilled beams (ACBs) as the cooling solution and an AHU with heat recovery device and a return filter:

| Example System | SFP (W/(l.s)) | |
|---|---------------|--------------------|
| | New Buildings | Existing Buildings |
| Central balanced mechanical ventilation system with heating and cooling and Active Chilled Beams (ACBs) | 1.9 | 2.5 |
| Heat Recovery - other systems | 0.3 | 0.3 |
| Additional return air filter for heat recovery | 0.1 | 0.1 |
| Total Maximum Specific Fan Power | 2.3 | 2.9 |

Online Documents

Non-domestic building services compliance guide - 2013 edition

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/453973/non_domestic_building_services_compliance_guide.pdf

Addendum to non-domestic building services compliance guide – 2013 edition

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/503643/Addendum_to_NDBSCG_on_Part_L.pdf